PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 108 (OLNEY SANDY SPRING ROAD) AND VILLAGE CENTER DRIVE IN MONTGOMERY COUNTY, MARYLAND, MD 108 IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA SIX-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 108 APPROACHES OPERATING CONCURRENTLY AND THE VILLAGE CENTER DRIVE APPROACHES OPERATING CONCURRENTLY. THE EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING ON THE EASTBOUND AND WESTBOUND MD 108 APPROACHES IS BEING CHANGED TO FLASHING RED ARROW OPERATION.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS BOTH LEGS OF MD 108 AND PEDESTRIAN INDICATIONS ARE PROVIDED ACROSS BOTH LEGS OF VILLAGE CENTER DRIVE.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

NORTH LEG - VILLAGE CENTER DRIVE AND MD 108

WAIT: "WAIT TO CROSS VILLAGE CENTER AT OLNEY SANDY SPRING."*

WALK: RAPID TICK

EAST LEG - MD 108 AND VILLAGE CENTER DRIVE

WAIT: "WAIT TO CROSS OLNEY SANDY SPRING AT VILLAGE CENTER," *

WALK: RAPID TICK

SOUTH LEG - VILLAGE CENTER DRIVE AND MD 108

WAIT: "WAIT TO CROSS VILLAGE CENTER AT OLNEY SANDY SPRING."*

WALK: RAPID TICK

WEST LEG - MD 108 AND VILLAGE CENTER DRIVE

WAIT: "WAIT TO CROSS DLNEY SANDY SPRING AT VILLAGE CENTER." *

WALK: RAPID TICK

* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPIDICULAR CROSSING IS < 10' ** MESSAGE USED IF CROSSWALK DIVERGES FROM DR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

SPLICE EXISTING LOOP WIRES TO NEW 2-CONDUCTOR

ELECTRICAL CABLES (ALUMINUM

WIRING KEY

A 7-CONDUCTOR ELECTRICAL B CABLE (NO. 14 A.W.G.)

5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)

2-CONDUCTOR ELECTRICAL

2-CONDUCTOR ELECTRICAL CABLE ALUMINUM SHIELDED

VIDEO CAMERA DETECTION

STRANDED BARE COPPER

(NO. 14 A.W.G.)

R (LEAD-IN CABLE

CABLE (NO. 14 A.W.G.)

SHIELDED) NO. 14 A.W.G. USING SPLICE KIT

THE EXISTING BASE MOUNTED CABINET AND CONTROLLER WILL BE USED. THE DETECTOR RACK WILL BE RETRO-FITTED WITH FOUR (4) FOUR-CHANNEL. TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS.

MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAY BE USED AS DIRECTED BY THE ENGINEER.

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STANDARD NO. MD-104.04-03 (LEFT LANE CLOSURE) STANDARD NO. MD-104.04-13 (LEFT TURN BAY CLOSURE)

WIRING DIAGRAM

----- A • U

A,B,C,D,E,F,G,H,J, K,L,M,N,D,P,Q,R,S,

V.W.X.Y.Z.AA.BB A.B.C.D.E.F.G. $H_{\bullet}J_{\bullet}K_{\bullet}L_{\bullet}M_{\bullet}P_{\bullet}Q_{\bullet}$ R,S,V,W,X,Y—

B.C.E.G.H.L.

M, R, S, T, V -----

<u>'</u>← C,E,G,H,L,

 $M_{\bullet}R_{\bullet}S_{\bullet}T_{\bullet}V$

-A,D,J,K,P,Q,W,X,Y

SPLICE EXISTING LOOP WIRES TO NEW 2-CONDUCTOR

ELECTRICAL CABLES (ALUMINUM SHIELDED) NO. 14 A.W.G. USING SPLICE KIT

STANDARD ND. MD-104.04-05 (RIGHT LANE CLOSURE) STANDARD NO. MD-104.04-07 (CENTER LANE CLOSURE) A. EQUIPMENT TO BE SUPPLIED BY THE SHA DESCRIPTION ITEM NO. QUANTITY RETRO FIT DETECTOR RACK 9000 1 EACH FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER 9016 2 EACH VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS 1 EACH SHEET ALUMINUM SIGNS TO CONSIST OF : 9571 92 S.F. - 2 EACH R10-12(2) SIGN (48 IN. x 36 IN.) - SPAN MOUNT ASSOCIATED SHIELD ASSEMBLY "EAST, MD 108 , RIGHT ARROW" (30 IN. x 51 IN.) — POLE MOUNT ASSOCIATED SHIELD ASSEMBLY "WEST, MD 108, LEFT ARROW" (48 IN. \times 75 IN.) - PULE MOUNT ASSOCIATED SHIELD ASSEMBLY "EAST, MD 108, RIGHT ARROW" (30 IN. \times 51 IN.) - POLE MOUNT ASSOCIATED SHIELD ASSEMBLY "WEST, MD 108, LEFT ARROW" (48 IN. x 75 IN.) - POLE MOUNT - 1 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS OLNEY SANDY SPRING ROAD" R10-3(1) SIGN (9 IN. × 15 IN.) TO READ "PUSHBUTTON TO CROSS VILALGE CENTER DRIVE" EQUIPMENT LIST "C" C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA ALL REMOVED SIGNAL MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR PROJECT CONTACTS

EQUIPMENT LIST "A"

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. BRIAN YOUNG PHONE: (301) 513-7404 ASSISTANT DISTRICT ENGINEER -TRAFFIC (PRINCE GEORGE'S)

MR. VERNON STINNETT ASSISTANT DISTRICT ENGINEER - MAINTENANCE PHONE: (301) 513-7304

MR, AUGIE REBISH DISTRICT UTILITY ENGINEER PHONE: (301) 513-7350 MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7630

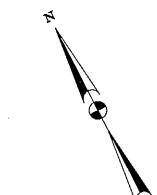
EQUIPMENT LIST "B"

TEM NO.	QUANTITY	DESCRIPTION
1003	1 EACH	MAINTENANCE OF TRAFFIC
5003	121Ó L.F.	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKINGS -
5004	625 L.F.	ANY WIDTH 12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC
5005	65 L.F.	24 INCH WHITE PREFORMED THERMOPLASTIC
5006	50 L.F.	5 INCH YELLOW PREFORMED THERMOPLASTIC
6002	1285 S.F.	5 INCH CONCRETE SIDEWALK
8001	1 EACH	2 WIRE CENTRAL CONTROL UNIT
8007	8 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION & SIGNS
8008	8 EACH	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8013	8 EACH	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEADS
8021	1 EACH	REM & DISPOSE MAT & EQUIP PER ASSIGN
8025	4 EACH	VIDEO DETECTION CAMERA & CABLE UP TO 500 FT
8034	65 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - SLOTTED
8035	180 L.F.	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4 INCHES - TRENCHED
8037	175 S.F.	DETECTABLE WARNING SURFACES
8038	92 S.F.	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING
8040	180 L.F.	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8046	1 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8050	42 EACH	12 INCH LED SIGNAL HEAD SECTION
8052	8 EACH	CUT, CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8053	1385 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8054	1975 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8056	1400 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

PHASE CHART

<	2 (R) (Y) (G)	3 R Y G	4 R Y G	5 (*) (*) (*)	6 (*) (*)	7 (R) (Y) (G)	8 (R) (Y) (G)	9 (2) (3)	10 (R) (Y) (G)	11 (R) (Y) (G)	12 (R) (Y) (G)	13 (R) (Y) (G)	14 (R) (Y) (G)	15 % 20	16 % 20	17 % 20	18 % /20	19 % ⁄20	20 * /20	21 % 20	22 * 20	
 G— +	_ G		R	← G—	—————————————————————————————————————	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW	

PHASE 1 + 5	← G—	← G	R	 R	← G—	← G—	R	R	R	R	R	R	R	R	DW								
1 + 5 CHANGE	PHASE	1 + 5	MAY CHA	NGE TO	PHASE	1 + 6,	PHASE 2	+ 5	OR PHAS	E 2 +	6	· · · · ·											<u> </u>
PHASE 1 + 6	← G—	← G-	G	G	← R—	← R—	R	R	R	R	· R	R	R	R	DW	<u></u>							
1 + 6 CHANGE	← Y	← Y—	G	G	← R	← R—	R	R	R	R	R	R	R	R	DW								
PHASE 2 + 5	← R—	← R—	R	R	← G—	← G—	G	G	R	R	R	R	R	R	DW	╛							
2 + 5 CHANGE	← R—	← R—	R	R	← Y—	← Y—	G	G	R	R	R	R.	R	R	DW	<u> </u>							
PHASE 2 + 6	← FL/R -	+ FL⁄R -	G	G	← FL/R -	← FL⁄R –	G	G	R	R	R	R	R	R	WK	WK	WK	wĸ	DW	DW	ĎW	DW	
PED CLEARANCE	← FL/R -	+ FL/R −	G	G	← FL/R	← FL⁄R –	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW	
2 + 6 CHANGE	← R—	← R—	Y	Υ	← R—	← R—	Υ	Y	R	R	R	R	R	R	DW	•							
PHASE 4 AND 8	← R-	← R—	R	R	← R·—	← R—	R	R	G	G	G	G	G	G	DW	_							
4 AND 8 CHANGE	← R—	← R—	R	R	← R—	← R—	R	R	Υ	Y	Y	Υ	Υ	Υ	DW	-1 ★							
PHASE 4 AND 8 ALT.	← R—	← R—	R	R	← Ř—	← R—	R	R	G	G	G	G	G	G	DW	DW	_ DW	DW	WK	WK	WK	WK	<u></u>
PED CLEARANCE	← R	← R—	R	R	← R—	← R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL⁄DW	
4 + 8 ALT. CHANGE	← R—	← R—	R	R .	← R—	← R—	R	R	Υ	Y	Y	Y	Y	Y	DW	i							
FLASHING OPERATION	← FL⁄R –	← FL/R	FLY	FLY	← FL⁄R -	← FL/R -	FL⁄Y	FLY	FL⁄R	FL⁄R	FL/R	FL/R	FL⁄R	FL∕R	DARK	+ +							



TOD No: XX444-25S SHA No: MO205A5D/B5D MD 108 @ Village Center Drive



STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION

MD 108 (Olney Sandy Spring Road) and Village Center Drive

	-	GENERAL INFORMA	TION SHE	ET
3 07 4	SCALE_	NONE ADVERTISED DATE 8/11/2009	CONTRACT NO	XX4445185
	-			-

TS NO. 2213 D

COUNTY ____ Montgomery S. Bloss LOGMILE _ 150108<u>13.5</u>2 DRAWN BY _____ CHECKED BY N. Leary 3/66

DRAWING TSP-3 OF 3

SHEET NO. 3 OF 3

WHITMAN, REQUARDI & ASSOCIATES, LLP 801 South Caroline Street, Baltimore, Maryland 21231

T | GROUND WIRE (NO. 6 A.W.G.) + - $\frac{3}{4}$ IN. X 10 FT. GROUND ROD

—Z∙AA

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